## **CLAIMS**

What is claimed is:

			-
	1	1.	A method of transferring units of information between clock domains
	2		in a memory system, the method comprising:
	3		loading a respective set of N units of information from an output circuit
	4		in a first clock domain into a storage circuit in a second clock
	5		domain during each clock cycle of the first clock domain; and
	6		the output circuit selecting each respective set of N units of information
	7		to include
	8		units of information that have previously been loaded into the
	9		storage circuit and that will not be output from the storage
	10		circuit prior to the storage circuit being loaded with a
	11		subsequent set of N units of information, and
The test of the test test	12		a complement number of units of information that have not
	13		previously been loaded into the storage circuit.
Ü			
	1	2	

- The method of claim 1 wherein the storage circuit is a shift circuit and wherein units of information are shifted out of the shift circuit in response to transitions of a clock signal in the second clock domain.
- The method of claim 1 further comprising generating a count value that indicates how many units of information M of each set of N units loaded into the storage circuit will be output from the circuit prior to the storage circuit being loaded with a subsequent set of N units of information, wherein the complement number of units of information

Atty. Docket No. 42390.P6357

- 6 includes M units of information.
- 1 4. The method of claim 3 wherein the count value is regenerated for each
- 2 clock cycle of the first clock domain.
- 1 5. The method of claim 4 wherein the count value remains constant over
- time if the frequency of the second clock domain is an integer multiple
- 3 of the frequency of the first clock domain.
- 1 6. The method of claim 4 wherein the count value varies over time if the
- 2 frequency of the second clock domain is not an integer multiple of the
- 3 frequency of the first clock domain.
- 1 7. The method of claim 3 wherein M is determined based on relative clock
- frequencies of first clock domain and the second clock domain.
- 1 8. The method of claim 1 wherein selecting each respective set of N units
- of information comprises selecting units of information from one or
- more of a plurality of information sources.
- 1 9. The method of claim 8 wherein selecting units of information from one
- or more of a plurality of information sources comprises selecting units
- of information from one or more of an information queue, a set of hold
- 4 registers and a source of null data.
- 1 10. The method of claim 9/wherein the plurality of information sources
- 2 further comprises a bypass source that bypasses the information queue.

Atty. Docket No. 42390.P6357

2		of information comprises issuing select signals to steering logic 83 to
3		select a respective one of a plurality of sources to supply each unit of
4		information in each respective set of N units of information.
1	12.	A method of transferring units of information between clock domains
2		in a memory system, the method comprising:
3		loading a first set of Nunits of information from an output circuit in a
4		first clock domain into a shift circuit in a second clock domain
7 8		during a first clock cycle of the first clock domain;
<u>4</u> 6		generating a count value, the count value indicating how many units of
<b>造</b> 7		information M of the first set of N units of information will be
	•	shifted out of the shift circuit prior to the shift circuit being loaded
i 9		with a second set of N units of information in a second clock cycle
10		of the first clock domain; and
. <u> </u>		loading the second set of N units of information from the output circuit
12		into the shift circuit during the second clock cycle, the second set of
13		N units including M units of information not previously loaded
14		into the shift circuit and N-M units of information from the first
15		set of N units/of information.

11. The method of claim 1 wherein selecting each respective set of N units

1